

REMARKS

Applicant has carefully reviewed the Official Action dated February 12, 2008, placing the above identified patent application under final rejection.

At page 2 of the Official Action, Claims 12, 13, 14, and 24 have been rejected under 35 U.S.C. Section 112, second paragraph, as being indefinite. The Examiner states that Claims 13 and 12 duplicate Claims 14 and 24, respectively. In response to this formal ground of rejection, Applicant has cancelled, without prejudice, Claims 14, 17, and 24. Applicant respectfully submits that the cancellation of these claims overcomes the formal grounds of rejection raised in the Official Action.

Applicant further respectfully requests that this Amendment be entered and considered, notwithstanding the final rejection. The Amendment merely cancels duplicative claims in response to a rejection raised in the Final Action. The cancellation of these duplicative claims does not raise any new issues requiring further search or consideration by the Patent & Trademark Office, and is directed exclusively to matters of form.

At pages 2 - 3 of the Official Action, all pending claims have been rejected under 35 U.S.C. Section 103(a) as being

unpatentable over the Atsunori reference (Japanese Publ. No. 11-047836) in view of Utashiro (U.S. Pat. No. 3,355,922) or Olson (U.S. Pat. No. 1,646,613). Applicant respectfully submits that all pending claims are allowable over the applied prior art references for the reasons to be discussed below.

The machine disclosed and claimed by Applicant is used to roll the sides of a pre-formed straight or profile selectively thinner so that the profile bends or twists lengthwise. A "beam" of this type is often referred to as a "profile". The objective of the Atsunori reference is similar in that it is used to roll the sides selectively thinner.

Contrary to the disclosure of the Atsunori reference, the Olson and Utashiro patents disclose machines which are instead used to bend a flat sheet into a straight profile by roll-forming. The straight pre-formed profile fabricated by the machines disclosed in the Olson and Utashiro patents are thereafter twisted and bent in a machine such as that disclosed by Atsunori. The procedure performed by the Atsunori machine is not roll-forming.

There is a difference between rolling to bend a sheet material into a profile in a roll-forming operation (such as that performed by the Olson and Utashiro patents), and rolling to make

a sheet material thinner (such as that performed by the Atsunori machine). For example, in steel work, a slab can be hot-rolled thinner and longer into a strip. Although this procedure involves rolling, it is not roll-forming. Thereafter, if it is desired to make the strip thinner, the hot-rolled strip can be rolled thinner and longer in a cold rolling process. However, this process is not "roll-forming" either.

When the upper parts of the sides 12b and 12c of the pre-formed profile illustrated by Figure 3 of Atsunori are thinned as shown in Fig. 4 of Atsunori, these upper parts are lengthened and the profile bends downwards as illustrated in Fig. 3 of Atsunori. When the lower parts of the sides 12b and 12c of Atsunori are thinned as illustrated in Fig. 6 of that reference, the profile then bends upwards as illustrated in Fig. 5 of that reference. This procedure is not "roll-forming".

Applicant respectfully submits that a rejection of the claims made in the Official Action combines two different types of apparatus, namely a roll-forming apparatus disclosed by the Olson and Utashiro patents, and the apparatus disclosed by the Atsunori patent which is not a "roll-forming" apparatus but, instead, rolls the sides of the pre-formed straight or profile selectively thinner so that the profile bends or twists lengthwise. As noted above, it is only after the machines

disclosed by Olson and Utashiro bend a flat sheet into a straight profile by roll-forming, that the Atsunori machine is then employed for selectively thinning the profile so that the profile bends or twists lengthwise.

Applicant respectfully submits that a combination of two different types of machines to reject Applicant's claims is not taught or suggested by the prior art itself, and is not within the knowledge of a person of ordinary skill in the relevant art. On the contrary, Applicant respectfully submits that the combination of two different types of apparatus to reject Applicant's claims can only be derived by using Applicant's own disclosure as a guide for selectively combining different features of the different references to reconstruct the claims. However, a rejection based upon a hindsight combination of different prior art references is improper, as a matter of law. See, for example, Orthopedic Equipment Co. v. United States, 217 USPQ 193 (Fed. Cir. 1983); In re Fritch, 23 USPQ 2d 1780 (Fed. Cir. 1992); and Micro-Chemical, Inc. v. Great Plains Chemical Co., Inc., 41 USPQ 2d 1238 (Fed. Cir. 1997).

In addition to the above, Applicant notes that in the Atsunori machine, the two rollers 3 and 4 act upon flanges 12b and 12c, respectively, by employing an intermediate central vertical roller 1. (See Figs. 5 and 6 of the Atsunori

references). The Atsunori apparatus is designed in a manner in which it is not possible to vary the width of the profile (the Examiner concedes this at page 2, last line, through page 3, line 2 of the Official Action - "...Atsunori does not show that the rolling devices can be carried on a frame movable towards and away from one another so as to change the width of the workpiece....". Moreover, the design of the Atsunori machine makes it impossible to bend a profile in the manner illustrated in Fig. 6 of Applicant's drawing in which a profile with more diverging sides and longer flanges 49, 50 can be bent, and thereafter, the diverging sides can be forced together so that the flanges 49, 50 can be welded together in order to get a structure that is bent or twisted.

Applicant respectfully notes that each of the pending independent claims expressly recites a bending apparatus including rolling devices movably carried by a frame so as to be movable towards and away from each other along guides for adaptation to the width of the profile.

Thus, although the Atsunori device is designed in a manner rendering it impossible to vary the width of the workpiece, this reference has been combined with a secondary reference (Utashiro or Olson) which the Official Action contends discloses means for varying the width. Applicant respectfully submits that there is

clearly no teaching or suggestion in the prior art itself, or within the knowledge of a person skilled in the relevant art, to combine the Atsunori reference, which clearly teaches against varying the width of the workpiece (since the apparatus is designed in a manner rendering it impossible to vary the width of the workpiece), with references disclosing means for varying the width of the workpiece. Since the Atsunori reference teaches against varying the width of the workpiece, while the Utashiro and Olson patents teach varying the width of the workpiece, there is clearly no teaching, suggestion, or motivation in the prior art itself to combine these references in any manner rendering Applicant's claims obvious because modifying the Atsunori device to enable varying the width would render the device non-functional. Accordingly, the combination of references made in the Official Action to reject Applicant's claims, which includes means for varying the width of the workpiece, can only be derived by using Applicant's own disclosure as a guide for selectively combining different features of different prior art references in the right way to reconstruct Applicant's claims. However, as noted above, a rejection based on a hindsight reconstruction of the claims is improper as a matter of law, even if all features of the claims are disclosed separately in different prior art references.

For the reasons discussed herein, Applicant respectfully submits that all pending claims are in condition for allowance over the references applied in the outstanding Official Action, and requests that the rejection be reconsidered and withdrawn.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'Mark P. Stone', written in dark ink.

Mark P. Stone
Reg. No. 27,954
Attorney for Applicant
25 Third Street, 4th Floor
Stamford, CT 06905
(203) 329-3355